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the day before the reception of the proof of the foregoing paper, and consequently too late to compare my views with those of the distinguished author. I am happy to find that the validity of the groups of Viviparidæ, which have been above defined, is confirmed by the researches of Dr. Troschel, who has examined the dentition of several species of true *Viviparus*, besides that of the *Paludina subcarinata* of Say, for which he has proposed the name *Lioplax*. The latter name is now substituted for *Haldemania* of Tryon, and is modified to form the name of a group containing that genus and *Melantho*.

#### Additional Remarks on the North America *ÆGIOTHI*.

BY ELLIOTT COUES, A. M., M. D.

Since the publication in the Proceedings of the Academy for November, 1861, of my Monograph of the genus, the Smithsonian has been constantly in the receipt of additional specimens from all parts of North America. These were mostly the *A. linarius*; but collections from the North have usually contained a number of well characterized examples of *A. exilipes*. Nothing, however, of special importance has been elucidated, until the reception of a series collected in winter in the vicinity of Quebec. These specimens, as they throw much light on the variations of the typical species of the genus, *A. linarius*, will merit a brief notice. If the deductions I have drawn from these specimens are warrantable, we have in North America the forms long recognized in Europe as *A. Holbölli* and *A. rufescens*; and these are both rather races than distinct species.

Selecting from the series two or three skins which differ most markedly from the usual style of *linarius*, and comparing them with a typical specimen of the latter from Philadelphia, I find the following differences:

The bird is very decidedly larger. The difference in total length is nearly one inch, as near as I can judge from the dried skins. The wings and tail are each about a fourth of an inch longer. The tarsus and middle toe with its claw are together about two-tenths of an inch longer.\* The bill and feet are decidedly larger and stouter, though perhaps not disproportionately so. The former is somewhat elongated; its lateral outlines straight instead of a little concave; its culmen slightly curved. The bill is of a bright chrome-yellow, except just along the culmen and at the extreme tip. The gular spot seems rather large. In other respects, the two birds are quite identical, for, with these differences in size, there is an exactly proportionate increase in the bill, feet, wings and tail; and the colors of the two do not differ appreciably, except in the bill, and perhaps the larger gular spot. The specimens give the idea, in fact, of overgrown individuals of the common *linarius*.

But now, on examining in detail the rest of the series, I find that, from the one extreme, the characters of which have just been given, there is a complete and gradual transition,—a diminution in size, down to specimens which cannot possibly be distinguished from typical *linarius*. There is no break in the series; no dividing point where we can stop calling the specimens "*linarius*" to give them another name; in spite of the discrepancy which is so evident between the two extremes.

The point of interest which attaches to these specimens, is the bearing they may have on the mooted question of the claims of *Ægiotus Holbölli* to full specific rank. As was the case at the time of the preparation of my Monograph, I have never examined a specimen which professed, upon good European authority, to be that species. Careful examination, however, of the

\*The tarsus, middle toe and claw together, of the specimens under consideration, measure absolutely 1.20 inches; the same parts in *linarius* are about one inch: in *exilipes* .80 of an inch.

figures and diagnoses of the various authors who have treated of this bird has shown that there are assigned to *Ægiothus Holbølli*, as distinctive characters, exactly those differences from the *linarius* which exist in the specimens under consideration,—viz. : larger size, larger, more elongated and bright yellow bill, and larger gular spot. I think there can be no reasonable doubt that these specimens represent in North America the form long recognized in Europe under the name of *Ægiothus Holbølli*.

If this be the case, next comes the question, what rank are we to accord to this form. Is it to be looked upon as an accidental variation from the type,—as a well marked variety,—or as a distinct species? Brehm was the first to proclaim it as distinct, and give it a name. Temminck, Schlegel, Bonaparte, and other authors,—who are rather more orthodox in their ideas of a species than is Brehm,—have always inclined, more or less decidedly, to the opinion that it is rather a race or subspecies of *A. linarius*. The fact of there being a complete gradation towards the *linarius*, has not escaped attention, and has been a powerful argument against according to it full specific rank. For my own part, though unable to demonstrate the point incontrovertibly, I am inclined to reiterate still more strongly the doubts expressed in my Monograph, as to the propriety of separating it from the *linarius*.

Pursuing this question of the variations which *A. linarius* presents, we find another species,—*A. rufescens*,—which has never been able to fully vindicate its claims to specific distinction. First introduced by Vieillot, its existence was strenuously denied by Temminck, doubtfully regarded by Bonaparte and Schlegel, and admitted by Cabanis and others. I have always entertained strong doubts as to its validity. The characters assigned are slight enough ; and that they exhibit a gradation towards *A. linarius*, is admitted even by those who contend for its separation from that species. In examining two hundred or more specimens, I find many individuals, fully as small, in fact, and with as much of a reddish tinge, as specimens from Europe labelled "*rufescens*" by good authority.

The existence, then, in North America of these two races, or species, whichever they may be, the one larger and the other smaller than the typical *linarius*, may be considered as exceedingly probable, if the fact be not actually demonstrable. As a sort of negative argument, I may remark, that one might naturally look for their occurrence in this country, as the typical *linarius* from Europe is absolutely identical with our own.

*Ægiothus rufescens* and *A. Holbølli*, compared with *A. exilipes*, afford a good illustration of the limits between which a species may vary from its normal type ; while another species, looking at first glance more like this type than do either of its extremes, is permanently distinct.

I have no reason to change any of the views expressed with regard to three new species I have introduced. Additional specimens confirm the position assumed, especially regarding *A. exilipes*. I may here, however, correct a typographical error, which gives the date of the first introduction of *A. fuscens* as "Aug., 1860," instead of "Aug., 1861."

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March 3d.

MR. JOS. JEANES in the Chair.

Twenty members present.

The following paper was presented for publication :

Enumeration of the plants collected by Dr. Parry, and Messrs. Hall and Harbour, in Colorado Territory. By Asa Gray.  
1863.]